

High Performance Liquid Chromatography

HPLC SYSTEM / LC-100



LC-100

Product Description:

- System is under fully automated digital intelligent computer control.
- In-parallel connected pumps with reciprocating double plungers improve the stability and dependability and prolong the service life.
- Its appearance is novel, and its operation is quite convenient and simply and fully incarnates the design of humanization.
- Every performance index is excellent and is competent to match popular fellow products abroad.
- Optical path system adopts a precise positioning structure and the technology of heat insulation installation, which guarantees high precision, small excursion and short period for stabilization.

P100 Pump

Reciprocating pump with a parallel connection of double plungers and an intelligent control of a microprocessor has higher operating pressure, smaller pulsation, stable performance, convenient operation and some other features, etc. Through alternating the double plungers to perfuse, the service life of the piston rod and that of the leather packing collar are twice longer than those of common pumps with connection in series.

All the mechanical components of the pumps adopt the computer aided design. Every key spare part is made in advanced digital control machining centers of the world. So, on the basis of such extraordinary machining accuracy and every set of pump after strict pressure tests, we can guarantee that our pumps will never have any possibility of leakage! Please use it free from care. The product has process monitoring function. The microprocessor furnished has the flow of the pump under a real-time control and provides an actual monitoring of the perfusion pressure. Once the pressure exceeds the limit, the pump will give an alarm and automatically stop operating.

Advanced Structural Design: The whole structure adopts a modular design and, including its mechanical parts and circuit parts can be independently assembled/ disassembled, so it is very conveniently for troubleshooting and maintenance.

The product adopts the micro drive circuit under a microprocessor control, which gets the stepper motor that drives the pump runs steadily, reduces its noise and enlarges the allowable range of speed regulation. So the product can satisfy the requirements of both the routine analysis and the microanalysis of flow well.

It has the function of process monitoring. The microprocessor performs a real-time control of flow and monitors the actual perfusion pressure constantly. In case of exceeding the pressure limit, it will give an alarm and stopping the pump's operation automatically.



- Flow Rate Range: 0.001-9.999 mL/min
- RSD< 0.06%
- Peak Operating Pressure: 42MPa
- Pressure Pulsation<0.1 MPa

UV100 UV Detector

With its pioneering digital switch system, the detector directly outputs digital signal to the WS100 workstation, which avoids the signal distortion and interference that common UV detectors may bring about during their multiple analog-to-digital conversion of chromatograph signal.

The optical path system adopts a precise positioning structure with high accuracy and small deviation. The deuterium lamp and the optical path system adopt the heat insulation technology, which shortens the stabilizing hours and minimizes the negative effect that the deuterium lamp brings to the optical path system.

The preamplifier adopts an instrument amplifier with high impedance but low excursion and an A/D switch with high definition. Under common analysis circumstances, its dynamic range can amount to 106, which ensures the precision of logarithmic calculation.



- Wavelength Range: 190-680nm
- Baseline Noise: $\pm 0.25 \times 10^{-5}$ AU (empty cell, response time: 1 second, 20 Ω)
- Baseline Drift: 0.4×10^{-4} AU
- Minimum Detection: 1×10^{-8} g/ML (Naphthalene/methyl alcohol solvent)
- Wavelength Repeatability: less than 0.2nm

LC-100 Specifications



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Infusion Unit	Model	P100 (Analytical)
	Infusion mode	dual-piston reciprocating parallel
	Max Working Pressure	42MPa
	Flow Range	0.001mL/min~9.999 mL/min
	Flow Precision	RSD<0.07%
	Fluctuation	0.1MPa
	Power Source	220V /110V
UV Detector	Model	UV100
	Flow cell volume	8μL
	Light Source	D2 lamp
	Wavelength Range	190~680nm
	Wavelength Accuracy	±1nm
	Wavelength Precision	0.1nm
	Noise	±0.25×10 ⁻⁵ AU (Static) / ±1×10 ⁻⁵ AU (dynamic, under specified requirements)
	Drift	≤ 0.4×10 ⁻⁴ AU/h (Static) / 2×10 ⁻⁴ AU/h (dynamic, under specified requirements)
	Minimum Detectable Concentration	5×10 ⁻⁹ g/mL
	Power Source	220V/110V
Column Oven	Model	CO100
	Temperature Control Range	5°~80°C/above room temperature
	Temperature stability	±2°C
	Temperature Precision	±0.1°C
	Power Source	220V /110V
Software Workstation	Model	WS100
	Signal Transmission Form	Full digital signal
	Operation Mode	Reflecting and monitoring the operation of instruments' each unit (editing gradient program for changing wavelength scanning, setting event procedure, spectrum scanning, spectrogram comparison, etc.)
	Interface	Chinese language interface, English interface (optional)
	Installation Method	Built-in, installed by disc